



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/551,718	06/23/2006	Antoni Ryszard Slabas	056222-5088-US	5793

9629 7590 01/19/2011
MORGAN LEWIS & BOCKIUS LLP
1111 PENNSYLVANIA AVENUE NW
WASHINGTON, DC 20004

EXAMINER

COLLINS, CYNTHIA E

ART UNIT	PAPER NUMBER
----------	--------------

1638

MAIL DATE	DELIVERY MODE
-----------	---------------

01/19/2011

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/551,718	Applicant(s) SLABAS ET AL.	
	Examiner Cynthia Collins	Art Unit 1638	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 November 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 and 17-33 is/are pending in the application.
- 4a) Of the above claim(s) 11,17-28,31-33 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10,12-14,29 and 30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 October 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

Applicant's election without traverse of Group II, claim(s) 1-10, 12-14, 29 and 30, drawn to a method comprising contacting a plant cell with a nonhydrolyzable NTP analogue, a composition comprising said analogue, and the use of the said analogue as an active agent in the preparation of a herbicidal composition, in the reply filed on November 2, 2010 is acknowledged. Claims 11, 17-28 and 31-33 are withdrawn from consideration as being directed to nonelected inventions.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 3, and claims 4-6 dependent thereon, are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 3 is indefinite in the recitation of "A method of killing a plant cell or plant cells according to claim 1", because there is insufficient antecedent basis for this limitation.

Claims 6, 7, 8, 10 and 13, and claims 11-12 and 14 dependent thereon, are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claims 6, 7, 8, 10

Art Unit: 1638

and 13 are indefinite in the use of parentheses, as it is unclear whether the parentheses limit the claims or not.

Claims 29-30 provide for the use of an ATP analogue and/or an ATPase inhibitor, but, since the claim does not set forth any steps involved in the method/process, it is unclear what method/process applicant is intending to encompass. A claim is indefinite where it merely recites a use without any active, positive steps delimiting how this use is actually practiced.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 29-30 are rejected under 35 U.S.C. 101 because the claimed recitation of a use, without setting forth any steps involved in the process, results in an improper definition of a process, i.e., results in a claim which is not a proper process claim under 35 U.S.C. 101. See for example *Ex parte Dunki*, 153 USPQ 678 (Bd.App. 1967) and *Clinical Products, Ltd. v. Brenner*, 255 F. Supp. 131, 149 USPQ 475 (D.D.C. 1966).

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-3, 5-10 and 12-13 are rejected under 35 U.S.C. 102(b) as being anticipated by Thomine S. et al. (Voltage-dependent anion channel of Arabidopsis hypocotyls: nucleotide regulation and pharmacological properties. J Membr Biol. 1997 Sep 1;159(1):71-82).

The claims are drawn to a method of controlling the viability of a plant cell or cells by contacting the plant cell or cells with a non-hydrolysable NTP analogue selected from the group consisting of: AMP-PCP, AMP-PNP, ATP- γ -S, GMP-PCP, GMP-PNP and GTP- γ -S,

The claims are also drawn to a composition for use in the method of claim 1 and for controlling the viability of a plant cell or plant cells, the composition comprising an active agent which, directly or indirectly, up- or down- regulates in the cell or cells a cell death pathway, which pathway is activatable by depletion of extracellular NTP (especially ATP) available for utilization by the cell or cells, wherein the active agent is a substance which activates the cell death pathway.

Thomine S. et al. teach contacting Arabidopsis plant cells with the non-hydrolysable NTP analogues AMP-PCP and ATP- γ -S, wherein the Arabidopsis plant cells are maintained in bathing medium supplemented with the nucleotides (pages 75-78 Figures 2-5). While Thomine S. et al. do not teach that theirs is a method “of controlling the viability of a plant cell or cells”, or that their composition is “for controlling the viability of a plant cell or plant cells”, Thomine S. et al. need not teach these limitations in order to anticipated the rejected claims because the recitation of these limitations in the preambles of claims 1, 10 and 13 are intended uses and thus not limiting.

Art Unit: 1638

Claim 14 is rejected under 35 U.S.C. 102(b) as being anticipated by Kawamura Y. et al. (ATP analogue binding to the A subunit induces conformational changes in the E subunit that involves a disulfide bond formation in plant V-ATPase. Eur J Biochem. 2001 May;268(10):2801-9).

Claim 14 is drawn to a composition according to claim 10 further comprising one or more components of conventional herbicidal compositions, selected from the group consisting of surfactants and penetration enhancers.

Kawamura Y. et al. teach a composition comprising AMP-PNP, said composition further comprising the surfactant triton X-100 (page 2802 column 2 first paragraph). Triton X-100 is a component of conventional herbicidal compositions (trifluralin and atrazine) as evidenced by Mata-Sandoval J. C. et al. (Influence of rhamnolipids and triton X-100 on the biodegradation of three pesticides in aqueous phase and soil slurries. J Agric Food Chem. 2001 Jul;49(7):3296-303, especially page 3297 column 1 last paragraph). While Kawamura Y. et al. do not teach that their composition is “for controlling the viability of a plant cell or plant cells”, Kawamura Y. et al. need not teach this limitation in order to anticipate the rejected claim because the recitation of this limitation in the preamble of claim 10 is an intended use and thus not limiting.

Remarks

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cynthia Collins whose telephone number is (571) 272-0794. The examiner can normally be reached on Monday-Friday 8:45 AM -5:15 PM.

Art Unit: 1638

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anne Marie Grunberg can be reached on (571) 272-0975. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Cynthia Collins/
Primary Examiner, Art Unit 1638

CC